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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 09/904,558 | 07/16/2001 | Akira Onishi | Q61341 | 6021 |
| 7590 | 11/18/2003 | | | EXAMINER |
| SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC 2100 Pennsylvania Avenue, N.W. Washington, DC 20037-3213 | | | | SHOSHO, CALLIE E |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1714 | |

DATE MAILED: 11/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------------|------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/904,558 | ONISHI ET AL. | |
| | Examiner Callie E. Shosho | Art Unit 1714 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 01 July 2003.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-10 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) 2-9 is/are allowed.
 6) Claim(s) 1 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

- 13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
 a) The translation of the foreign language provisional application has been received.
 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
 4) Interview Summary (PTO-413) Paper No(s). _____.
 5) Notice of Informal Patent Application (PTO-152)
 6) Other: _____

DETAILED ACTION

1. All outstanding rejections are overcome by applicants' amendment filed 7/21/03.

In paragraph 4 of the office action mailed 3/19/03, examiner stated that Kitayama et al. (U.S. 5,130,113) disclosed filling viscosity of 1000 cP while in fact Kitayama et al. disclose filling viscosity of 1000 P. In order to correct this inadvertent error, the rejection of record of claim 1 with respect to Kitayama et al. has been restated below using the correct viscosity and thus, the following action is non-final.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Kitayama et al. (U.S. 5,130,113).

Kitayama et al. disclose fine particle of aluminum hydroxide for filling in a resin such that when 200 parts aluminum hydroxide is filled into 100 parts unsaturated polyester which has viscosity of 10 P, the viscosity is less than 1000 P (col.5, lines 21-25, col.11, lines 22-23, and col.16, lines 48-50).

Although there is no disclosure that when 150 parts fine particle of aluminum hydroxide is filled into resin composition comprising 100 parts of another unsaturated polyester and 2 parts methyl ethyl ketone peroxide, the curing time until the viscosity becomes immeasurable is less

than 20 minutes, given that Kitayama et al. disclose aluminum hydroxide identical to that presently claimed as described above, it is clear that such aluminum hydroxide would inherently result in curing time until the viscosity becomes immeasurable of less than 20 minutes.

In light of the above, it is clear that Kitayama et al. anticipate the present claims.

Response to Arguments

4. Applicants' arguments have been fully considered but they are not persuasive.

Specifically, applicants argue that there is no disclosure in Kitayama et al. of filling viscosity as presently claimed.

However, Kitayama et al. disclose that when 200 parts aluminum hydroxide is filled into 100 parts polyester which has viscosity of 10 cP, the filling viscosity is less than 1000 P, preferably less than 800 P. This viscosity clearly overlaps the presently claimed viscosity of less than 200 P. While the viscosity range disclosed by Kitayama et al. is broader than that presently claimed, MPEP 2131.03 states that "if the claims are directed to a narrow range, the reference teaches a broad range, and there is evidence of unexpected results within the claimed narrow range, depending on other facts of the case, it may be reasonable to conclude that the narrow range is not disclosed with "sufficient specificity" to constitute anticipation of the claims". In the present situation, however, it is noted that applicants have supplied no evidence to establish the criticality of the presently claimed viscosity.

Further, while it is agreed that there are no examples in Kitayama et al. which disclose viscosity less than 200 P, "applicant must look to the whole reference for what it teaches."

Applicant cannot merely rely on the examples and argue that the reference did not teach others."

In re Courtright, 377 F.2d 647, 153 USPQ 735,739 (CCPA 1967). A fair reading of the reference as a whole discloses that when 200 parts aluminum hydroxide is filled into 100 parts polyester which has viscosity of 10 cP, the filling viscosity is less than 1000 P which clearly overlaps the viscosity presently claimed.

Note: On page 11 of the amendment filed 7/21/03, applicants state that col.12, lines 45-46 of Kitayama et al. disclose viscosity of 10,000 cP which corresponds to viscosity of 1000 P. However, it is noted that 10,000 cP corresponds to viscosity of 100 P. Given that it is agreed that this viscosity refers to the varnish viscosity and not the filling viscosity as presently claimed, this portion of the disclosure by Kitayama et al. does not encompass the scope of the present claim 1.

Allowable Subject Matter

5. Claims 2-9 are allowable over the "closest" prior art Kitayama et al. (U.S. 5,130,113) and Oda et al. (U.S. 4,829,103) for the following reasons.

Kitayama et al. disclose fine particle of aluminum hydroxide comprising (1) aluminum hydroxide having secondary particle size of less than 30 μm corresponding to presently claimed aluminum hydroxide Z and (2) aluminum hydroxide having secondary particle size of 40-100 μm corresponding to presently claimed aluminum hydroxide X. It is disclosed that the aluminum hydroxide Z has BET surface area of $3 \text{ m}^2/\text{g}$ or less. The ratio of aluminum hydroxide Z/aluminum hydroxide X is 1:9 to 9:1. There is further disclosed a cured resin composition for forming artificial marble wherein the composition comprises unsaturated polyester and fine

particles of aluminum hydroxide as described above wherein the resin filling viscosity is less than 800 P.

However, there is no disclosure in Kitayama et al. of aluminum hydroxide Y having BET specific surface area of 1 m²/g or less and secondary particle size of 10-35 µm as required in present claims 2 and 10. That is, while the present claims require ternary composition comprising three types of aluminum hydroxide, Kitayama et al. disclose binary composition comprising two types of aluminum hydroxide.

With respect to present claim 3, it is noted that Kitayama et al. disclose ratio of aluminum hydroxide X to aluminum hydroxide Z of 9:1 to 1:9 which broadly overlaps the presently claimed ratio of aluminum hydroxide X to aluminum hydroxide Z of 80:20 (4:1) to 75:25 (3:1). However, Kitayama et al. do not disclose any criticality with respect to the ratio of aluminum hydroxide X to aluminum hydroxide Z. This is especially significant in light of the comparative data set forth in table 1 of the present specification which compares aluminum hydroxide mixture comprising aluminum hydroxide X (coarse particle) and aluminum hydroxide Z (fine particle) in ratio within the scope of the present claims (example 3 and 4) with aluminum hydroxide mixture comprising aluminum hydroxide X and aluminum hydroxide Z in ratio outside the scope of the present claims but within the scope of Kitayama et al. (comparative examples 7 and 8). It is shown that the presently claimed aluminum hydroxide is superior in terms of viscosity and curing time.

Oda et al. disclose fine particle of aluminum hydroxide comprising (1) aluminum hydroxide having secondary particle size of up to 100 µm corresponding to presently claimed

aluminum hydroxide Z and (2) aluminum hydroxide having secondary particle size of 15-100 μm corresponding to presently claimed aluminum hydroxide X. The BET surface area of the mixture of the first and second aluminum hydroxide is less than 1 m^2/g . There is further disclosed a cured resin composition for artificial marble wherein the resin composition comprising unsaturated polyester and fine particles of aluminum hydroxide as described above.

However, there is no disclosure in Oda et al. of aluminum hydroxide Y having BET specific surface area of 1 m^2/g or less and secondary particle size of 10-35 μm as required in present claims 2 and 10. That is, while the present claims require ternary composition comprising three types of aluminum hydroxide, Oda et al. disclose binary composition comprising two types of aluminum hydroxide.

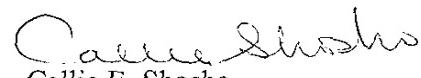
With respect to present claim 3, it is noted that Oda et al. disclose ratio of aluminum hydroxide X to aluminum hydroxide Z is at most 70:30 which falls outside the scope of present claim 3. Additionally, comparative data set forth in Table 1 of the present specification which compares aluminum hydroxide mixture comprising aluminum hydroxide X (coarse particle) and aluminum hydroxide Z (fine particle) in ratio within the scope of the present claims (examples 3 and 4) with aluminum hydroxide mixture comprising aluminum hydroxide X and aluminum hydroxide Z in ratio outside the scope of the present claims but within the scope of Oda et al., i.e. ratio of 70:30 (comparative example 8) shows that the presently claimed aluminum hydroxide is superior in terms of viscosity and curing time.

In light of the above, it is clear that Kitayama et al. do not disclose or suggest the invention of present claims 2-10.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 703-305-0208. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 703-306-2777. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.


Callie E. Shosho
Primary Examiner
Art Unit 1714

CS
11/14/03